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SCIENCE

FRIDAY, NOVEMBER 19, 1915

BIOLOGICAL RESEARCH; THE VALUE AND
THE DANGER¹

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I SEIZE with avidity the opportunity furnished me as your retiring president to discuss a subject which I am anxious should have your earnest consideration. I am aware that the title which I have announced is ambiguous, but I think that before I am through there will be no lack of understanding as to what I have in mind. *Biological research* includes many things. I mean to limit myself to those phases of it which require the experimental use of living animals. And I grasp this opportunity because I feel that our colleagues in other fields of scientific effort do not always fully perceive the value of the knowledge attained by this means; and that they do not at all appreciate the danger that freedom of research in these lines may be seriously hampered by hostile legislation or misdirected public opinion.

You who are engaged in very various lines of research will appreciate the fact that the immediate application of a discovery is no fair measure of its value; the ultimate results of the knowledge obtained may become extremely far-reaching. It is in the creation of a background of knowledge and experience that the greatest good is to be obtained. Often we point to certain noteworthy achievements and at the same time fail to perceive that they have become possible only through the accumulation of a multitude of small details, the results attained by the humdrum plodding of patient mediocrity.

The creative imagination of genius is

MSS. intended for publication and books, etc., intended for review should be sent to Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

¹ President's address before the California Chapter of the Sigma Xi, April 28, 1915.